

Get to know FirstNet

Officer.com By TJ Kennedy

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For decades first responders have been limited to essentially unchanged radio communications for voice. Today, first responders rely on more than 10,000 separate, incompatible, and often proprietary land mobile radio networks. Too often law enforcement, fire, and EMS in the same city, and sometimes within the same department, cannot communicate with each other. As a result, their ability to protect the community's health, safety, and property can be compromised.

What is FirstNet?

The First Responder Network Authority (FirstNet) grew out of a 9/11 Commission recommendation calling for interoperable communications for all first responders. Many emergency response teams—law enforcement, fire, and EMS—had difficulty communicating with each other on September 11, 2001. Communications difficulties can slow response times, create confusion, and on 9/11 may even have prevented public safety personnel from saving lives.

In response to the Commission recommendation, Congress created FirstNet when it passed The Middle Class Tax Relief and Job Creation Act of 2012 (the Act). An independent authority within the U.S. Department of Commerce's National Telecommunications and Information Administration, FirstNet, is tasked with ensuring the establishment of a single wireless network dedicated to serving public safety professionals in the U.S., including all 50 states, the five territories, and the District of Columbia.

The Act required the Federal Communications Commission (FCC) to reallocate the 700 MHz D Block spectrum for use by public safety entities. In addition, the Act required the FCC to grant a single license to FirstNet for the use of both the 700 MHz D block and existing public safety broadband spectrum. As such, the network will improve upon the current patchwork of communications systems and frequencies that make it difficult for emergency responders from different jurisdictions to coordinate their efforts.

Based on the same radio spectrum and standards-based technology throughout, it'll be a single public safety network linking local public safety agencies with state, tribal, and federal agencies that cross most of the geography of the U.S. and its territories through a combination of ground, mobile, and satellite communications systems. Law enforcement officers, firefighters, and paramedics will finally have a communications system that they all can use, across a variety of jurisdictions, at the same time.

A broadband network to support mobile technologies

The FirstNet operating environment will likely be similar to that of newer personal 4G LTE smartphones, where “4G” means the fourth generation of mobile telecommunications technology. In addition to the usual voice and other services of previous generations, 4G provides faster mobile broadband Internet access to laptops, to smartphones, and to other mobile devices. It follows that 4G applications (apps) will include mobile web access, video conferencing, and HD video, to name a few. LTE, an abbreviation for long-term evolution, is a standard for wireless communication of high-speed data for mobile phones and data terminals.

The network's standards-based architecture will likely result in cheaper components and facilitate a shift in usage so users embrace services and apps. One goal of FirstNet is to allow first responders to take advantage of evolving, Internet-based mobile communications technology through intelligent devices like smartphones and tablets, as well as wearable technology. Initially, the network is intended to provide Internet-based, high-speed data services that augment the voice capabilities of today's radio networks. FirstNet plans to enable users to send and receive data, video, images, and text, as well as use voice applications and benefit from the ability to share applications.

Just as smartphones and Internet-based networks have changed the way individuals communicate in their personal lives, FirstNet believes that the nationwide interoperable public safety broadband network will change the way law enforcement operates for the better. And just as one can download apps on smartphones, tablets, or laptops now, once the FirstNet network is established, FirstNet envisions users being able to go to the FirstNet app store to download law enforcement apps for their FirstNet devices.

Priority and preemption for public safety

Like the commercial 4G LTE networks supporting personal smartphones, FirstNet is ensuring the establishment of a wireless public safety network that is data-driven and Internet-based. A key difference between commercial 4G LTE networks and the FirstNet public safety network is that the FirstNet network is being developed specifically to meet the needs of public safety. Unlike the commercial wireless networks that enable personal smartphones, FirstNet's public safety network will feature priority usage and preemption during large emergencies. The network operating standards will provide local control to public safety agencies, allowing for more control over provisioning, device features, and reporting.

During emergencies where multiple agencies converge in a small area, public safety entities need an exclusive public safety network so they can communicate without interruption. And, with FirstNet, they will have it—especially important during large emergencies when consumers may overload commercial wireless networks to reach families and friends.

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